

## CLAIMS

1. A video display apparatus characterized by comprising:

5 an electron beam scanning apparatus that scans on a screen an electron beam according to an input luminance signal, thereby producing a luminance distribution on the screen for the display of an image;

a plurality of velocity modulation coils provided in  
10 said electron beam scanning apparatus, each generating a modulation magnetic field for modulating the scanning speed of said electron beam; and

a plurality of scanning-speed modulation circuits that supply said plurality of velocity modulation coils with  
15 currents for modulating the scanning speed, respectively, based on said input luminance signal.

2. The video display apparatus according to Claim 1, characterized in that said plurality of velocity modulation  
20 coils have the same number of turns.

3. The video display apparatus according to Claim 2, characterized in that each of said plurality of scanning-speed modulation circuits includes a

differentiation circuit that differentiates said luminance signal.

4. The video display apparatus according to Claim 1, characterized in that said plurality of velocity modulation  
5 coils have different numbers of turns.

5. The video display apparatus according to Claim 4, characterized in that

each of said plurality of scanning-speed modulation  
10 circuits includes a differentiation circuit that differentiates said luminance signal;

said differentiation circuits in said plurality of scanning-speed modulation circuits have different differential frequencies; and

15 said plurality of scanning-speed modulation circuits are connected to said plurality of velocity modulation coils, respectively, such that a differentiation circuit having a lower differential frequency is combined with a velocity modulation coil having a greater number of turns.

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6. The video display apparatus according to Claim 5, characterized in that

each of said plurality of scanning-speed modulation circuits further includes a low pass filter in a stage prior  
25 to said differentiation circuit;

said low pass filters in said plurality of scanning-speed modulation circuits have different cut-off frequencies; and

the cut-off frequency of said low pass filter in each  
5 of said plurality of scanning-speed modulation circuits is set such that a low pass filter having a lower cut-off frequency is combined with a differentiation circuit having a lower differential frequency.

10 7. The video display apparatus according to Claim 4, characterized in that

said plurality of scanning-speed modulation circuits include differentiation circuits that perform differentiation of different orders with respect to said  
15 respective luminance signals; and

said plurality of scanning-speed modulation circuits are connected to said plurality of velocity modulating circuits, respectively, such that a differentiation circuit that performs lower-order differentiation is combined with  
20 a velocity modulation coil having a greater number of turns.

8. The video display apparatus according to Claim 1, characterized in that said electron beam scanning apparatus including:

25 a cathode ray tube;

a horizontal deflection device that deflects an electron beam in said cathode ray tube in the horizontal direction; and

a vertical deflection device that deflects an electron  
5 beam in said cathode ray tube in the vertical direction, and

said plurality of velocity modulation coils being arranged so as to modulate the scanning speed of the electron beam in the horizontal direction.

10 9. A video display apparatus characterized by comprising:

an electron beam scanning apparatus that scans on a screen an electron beam according to an input luminance signal, thereby producing a luminance distribution on the  
15 screen for the display of an image;

first and second saddle-type velocity modulation coils provided opposed to each other in said electron beam scanning apparatus, each producing a modulation magnetic field for modulating the scanning speed of said electron beam; and

20 a scanning-speed modulation circuit that supplies said first and second velocity modulation coils with currents for modulating the scanning speed, respectively, based on said input luminance signal.

10. The video display apparatus according to Claim 9 characterized in that said scanning-speed modulation circuit includes:

a signal generation circuit that generates a  
5 scanning-speed modulation signal based on said input luminance signal; and

first and second current supply circuits that supply currents for modulating the scanning speed to said first and second velocity modulation coils, respectively, based on said  
10 scanning-speed modulation signal generated by said signal generation circuit.

11. The video display apparatus according to Claim 9 characterized in that

15 said first and second velocity modulation coils are connected in parallel with each other, and

said scanning-speed modulation circuit includes:

a signal generation circuit that generates a  
scanning-speed modulation signal based on said input  
20 luminance signal; and

a current supply circuit that supplies said first and second velocity modulation coils with currents for modulating the scanning speed, respectively, based on said scanning-speed modulation signal generated by said signal  
25 generation circuit.

12. The video display apparatus according to Claim 9 characterized in that said electron beam scanning apparatus includes:

5       a cathode ray tube;

      a horizontal deflection device that deflects an electron beam in said cathode ray tube in the horizontal direction; and

      a vertical deflection device that deflects an electron  
10 beam in said cathode ray tube in the vertical direction, and

      said first and second velocity modulation coils being arranged so as to modulate the scanning speed of the electron beam in the horizontal direction.